Real-Time Text: Improving Accessible Telecommunications

Real-time text – or RTT – is a technology that will soon allow text to be sent immediately as it is created through wireless handsets that use IP-based technology on networks that support RTT. With RTT, there is no need to press a "send" key as there generally is for SMS, chat, or other types of texting; rather, the recipient of the message can read the message as soon as the sender types it. This ability to send text transmissions instantly is similar to the instantaneous exchange of information on voice conversations that take place over the phone, and can be critical for emergency calls to 911.

> *Wireless service providers and manufacturers of wireless handsets, which are required to support TTY technology, can now use RTT as they migrate to Internet protocol-based technology.*

Advantages to RTT

In addition to improving accessible emergency communications, RTT has a number of other advantages over TTYs:

- RTT provider callers with more characters for typing than TTYs do. For example, with RTT, you can use the "@" key, alphabets in multiple languages, and emojis. Another way of saying this is that RTT allows conversations using the full "international character set."
- RTT can eliminate the need to purchase specialized devices, such as TTYs, to send text in real time over wireless phones.
- Calls using RTT can be initiated and received using the same ten-digit numbers used for voice calls.
- Both parties to an RTT call can send and receive text in real time at the same time, unlike TTYs, which requires turn-taking.
- RTT is more reliable than TTY technology over IP networks – this means there will be less garbling and fewer drop-offs on calls.

With RTT, you will be able to call:

- Other RTT users, regardless of the network or device they use.
- Emergency services by dialing 911.
- Relay services by dialing 711.
- TTY users, including individuals, businesses, and government agencies.

Accessible Calling Features

Accessible Call Indicators. The FCC encourages service providers and manufacturers that support RTT to provide accessible call indicators to inform callers about audio activity that takes place during phone and incoming RTT calls. This is to ensure, for example, that people who cannot hear know when their outgoing calls are answered or reach a busy signal – just as ringtones and aural busy signals provide such notification to people who can hear.

In addition, the FCC encourages inclusion of the following features and capabilities that are generally available to voice telephone users:

Federal Communications Commission · Consumer and Governmental Affairs Bureau · 445 12th St. SW. Washington, DC 20554
1-888-CALL-FCC (1-888-225-5322) · TTY: 1-888-TELL-FCC (1-888-835-5322) · Fax: 1-866-418-0232 · www.fcc.gov/consumer-governmental-affairs-bureau

- Latency and error rates that are functionally equivalent to real-time voice telephone communications.
- The ability for callers to use teleconferencing, caller ID features, and interactive voice response systems, as well as to transfer calls.
- The ability for callers to control text settings, such as font, size, and color.
- Making RTT a pre-installed feature of wireless devices that is enabled by a default setting – so RTT is readily available without the need to turn it on.

Timelines for availability of RTT services and RTT-capable devices

Companies that choose to provide RTT services instead of supporting TTYs over their wireless IP networks must follow the following timelines:

Wireless Providers

- **December 31, 2017**: Companies that provide wireless services nationwide – AT&T, Verizon, T-Mobile and Sprint – must either make a downloadable RTT application or plug-in available, or implement changes to their networks to support RTT and offer at least one RTT-capable handset.
- **December 31, 2019**: Nationwide carriers – AT&T, Verizon, T-Mobile, and Sprint – must support RTT on all of their new wireless devices.
- **June 30, 2020**: Companies that provide wireless services locally or regionally, but not nationwide, must either make a downloadable RTT application or plug-in available, or implement changes to their networks to support RTT and offer at least one RTT-capable handset.
- **June 30, 2021**: Local and regional providers (including resellers) must support RTT on all of their new wireless devices.

Wireless Equipment Manufacturers

- **December 31, 2018**: Manufacturers of handsets for use with wireless IP-based voice services must implement RTT in all handsets manufactured after December 31, 2018.

Over the next year or two, some wireless service providers and manufacturers will begin to support RTT. When purchasing a new wireless handset, you should check to see whether it is RTT-capable and when your service provider intends to support RTT on its network.

In the meantime, some carriers have been waived from the requirement to support TTY on wireless IP networks, including calls to 911, subject to the following conditions:

- Carriers must notify consumers that their IP-based wireless services will not support TTY technology for calls to 911.
- Carriers must provide consumers with information about alternative text-based accessibility solutions.
- Carriers must file periodic progress reports on their development of RTT with the Commission.

TTY and RTT transition period

For now, TTY and RTT technologies must be compatible (interoperable) with each other. This means that TTY users and RTT users must be able to communicate with each other. However, communication between RTT and TTY users will be limited to the TTY character set, rather than the RTT international character set, and RTT and TTY users will need to take turns sending and

Federal Communications Commission · Consumer and Governmental Affairs Bureau · 445 12th St. SW. Washington, DC 20554
1-888-CALL-FCC (1-888-225-5322) · TTY: 1-888-TELL-FCC (1-888-835-5322) · Fax: 1-866-418-0232 · www.fcc.gov/consumer-governmental-affairs-bureau

receiving messages when sending text to each other. The FCC has an open proceeding about the length of time that TTY-RTT interoperability should continue to be required.

Filing a complaint

The FCC is updating its Consumer Complaint Center to permit individuals to file complaints online concerning our rules governing TTY and RTT access to wireless services. At this time, if you have a problem with such access, you may file a complaint by letter, phone, fax, or e-mail:

Federal Communications Commission
Consumer and Governmental Affairs Bureau
Consumer Inquiries and Complaints Division
445 12th Street, SW
Washington, DC 20554

Phone: 1-888-225-5322
TTY: 1-888-835-5322
Videophone: 1-844-432-2275
Fax: 202-418-0037
E-mail: dro@fcc.gov

If you need assistance filing a complaint, you may also contact the FCC's Disability Rights Office at dro@fcc.gov or by calling 202-418-2517 (voice), 888-835-5322 (TTY), or 1-844-432-2275 (videophone).

Your complaint should include the following information (if available):

- Your name, address, and other contact information, such as telephone number and e-mail address.
- The name and contact information of the device manufacturer or wireless carrier.
- Information about the device or software used.
- The date or dates that you purchased, acquired, or used, or tried to purchase, acquire, or use the device.
- A description of the accessibility problem and what would like done to solve the accessibility problem.
- How you would like the FCC to respond to you, such as by e-mail, letter, or telephone.
- Any additional information you think is appropriate.

For more information

For more information about RTT, or to learn more about FCC programs that promote access to communication services for people with disabilities, visit the FCC's Disability Rights Office website at www.fcc.gov/disability.

Accessible formats

To request this article in an accessible format - braille, large print, Word or text document or audio - write or call us at the address or phone number at the bottom of the page, or send an email to fcc504@fcc.gov.

Last Reviewed 3/30/17